IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Kemal GULER et al.	§	Confirmation No.:	3759
Serial No.:	10/694,589	§	Group Art Unit:	3695
Filed:	October 27, 2003	§	Examiner:	Michael D. Cranford
For:	Analyzing Auction Data Having A Varying Number Of Bidders	§	Docket No.:	200208419-1

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: September 22, 2010

Sir:

Appellants hereby submit this Appeal Brief in connection with the above-identified application. A Notice of Appeal was electronically filed on July 30, 2010.

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive West, Houston, Texas, 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Originally filed claims:	1-19.
Claim cancellations:	None.
Added claims:	None.
Presently pending claims:	1-19.
Presently appealed claims:	1-19.

IV. STATUS OF THE AMENDMENTS

No claims were amended after the Final Office Action dated June 25, 2010.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

This section provides a concise explanation of the subject matter defined in each of the independent claims, referring to the specification by page and line number or to the drawings by reference characters as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified with a corresponding reference to the specification or drawings where applicable. The specification references are made to the application as filed by Appellants. Note that the citation to passages in the specification or drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element. Also note that these specific references are not exclusive; there may be additional support for the subject matter elsewhere in the specification and drawings.

In accordance with the invention of claim 1, a method is performed by a processor. The method analyzes auction data and comprises organizing previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders, the number of bidders varying among the sub-samples.[1] The method further comprises applying an inverse bid function to at least two sub-samples,[2] pooling results from applying the inverse bid function to form a first pool,[3] applying a direct bid function on the first pool to generate sample bids[4] matching bids from at least one sub-sample to the sample bids,[5] and pooling results from the matching with the first pool to form a second pool.[6]

In accordance with the invention of claim 5, a method (also performed by a processor) comprises organizing previously acquired auction data into a plurality

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[1] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[2] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[3] Fig. 2 (82). Fig. 3 (108). Disclosure p. 7 lines 11-13 of para. [0026]. Page 8 lines 5-10.

[4] Disclosure p. 3 lines 1-10 of para. [0011]. Page 26 line 1 of para. [0026] through line 9 of para. [0027].

[5] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

[6] Disclosure p. 1 lines 1-8 of para. [0002].

of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders, a first sub-sample comprising bid data associated with auctions having more bidders than all other sub-samples.[7] The method further comprises applying an inverse bid function to the largest sub-sample to produce initial pseudo values,[8] applying a direct bid function to the initial pseudo values to calculate sample bids associated with a second sub-sample that is the next largest sub-sample, in terms of number of bidders, after the first sub-sample,[9] matching bid data contained in the second sub-sample with the sample bids to produce second pseudo values,[10] and combining the first and second pseudo values together to produce combined auction values.[11]

In accordance with the invention of claim 9, a system comprises a processor[12] and memory containing an auction application that is executed by the processor[13] and causes the processor to perform various tasks. Such tasks include forming a plurality of sub-samples from an auction data set, each sub-sample comprising bid data associated with auctions having a common number of bidders,[14] applying an inverse bid function to at least two sub-samples,[15] and aggregating results from applying the inverse bid function to form a first pool.[16] The process is also causes to apply a direct bid function on the first pool to generate sample bids,[17] match bids from at least one sub-sample to the sample

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[7] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[8] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[9] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[10] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

[11] Disclosure p. 1 lines 1-8 of para. [0002].

[12] Fig. 4 (202). Disclosure p. 8 line 3 of para. [0031].

[13] Fig. 4 (204, 220). Disclosure p. 8 lines 3-7 of para. [0031].

[14] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[15] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[16] Fig. 2 (82). Fig. 3 (108). Disclosure p. 7 lines 11-13 of para. [0026]. Page 8 lines 5-10.

[17] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

bids,[18] and aggregate results from the matching with the first pool to form a second pool.[19]

In accordance with the invention of claim 12, a system comprises a processor[20] and an application executable by the processor[21] and that causes the processor to organize previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders.[22] The processor is also causes to apply an inverse bid function to at least two sub-samples,[23] re-sample results from applying the inverse bid function to generate re-sampled data,[24] apply a direct bid function on the sampled data to generate sample bids,[25] and match bids from at least one sub-sample to the sample bids.[26]

In accordance with the invention of claim 14, a computer readable storage medium storing instructions that when executed by a processor cause the processor to process auction data.[27] The instructions comprise at least one instruction that organizes previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders[28] and at least one instruction that applies a first bid function to at least two sub-samples.[29] The instructions further comprise at least one instruction that re-samples results from applying the first bid function to

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[18] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

[19] Disclosure p. 1 lines 1-8 of para. [0002].

[20] Fig. 4 (202). Disclosure p. 8 line 3 of para. [0031].

[21] Fig. 4 (220). Disclosure p. 8 lines 6-7 of para. [0031].

[22] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[23] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[24] Disclosure p. 7 lines 1-9 of para. [0027].

[25] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[26] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

[27] Fig. 4 (204, 220). Disclosure p. 8 lines 3-7 of para. [0031].

[28] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[29] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

generate re-sampled data,[30] at least one instruction that applies a second bid function on the sampled data to generate sample bids,[31] and at least one instruction that matches bids from at least one sub-sample to the sample bids.[32]

In accordance with the invention of claim 17, a computer readable storage medium storing instructions that when executed by a processor cause the processor to process auction data.[33] The instructions comprise at least one instruction that forms previously acquired auction data into a plurality of sub-samples, each sub-sample comprising auction data associated with auctions having a common number of bidders, a first sub-sample comprising bid data associated with auctions having more bidders than all other sub-samples.[34] The instructions further comprise at least one instruction that applies an inverse bid function to the largest sub-sample to produce initial pseudo values,[35] at least one instruction that applies a direct bid function to the initial pseudo values to calculate sample bids associated with a second sub-sample that is the next largest sub-sample, in terms of number of bidders, after the first sub-sample,[36] at least one instruction that matches bid data contained in the second sub-sample with the sample bids to produce second pseudo values, and at least one instruction that combines the first and second pseudo values together to produce combined auction values.[37]

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[30] Disclosure p. 7 lines 1-9 of para. [0027].

[31] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[32] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

[33] Fig. 4 (204, 220). Disclosure p. 8 lines 3-7 of para. [0031].

[34] Fig. 2 (66, 68). Fig. 3 (100a-c). Disclosure p. 6 lines 1-24 of para. [0024].

[35] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[36] Disclosure p. 4 line 1 of para. [0016] through p. 6 line 1 of para. [0025].

[37] Disclosure p. 26 line 1 of para. [0026] through line 9 of para. [0027].

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-5 and 8-19 are anticipated by Dawson (U.S. Pat. Pub. No. 2002/0042765).

Whether claims 6 and 7 are obvious over Dawson in view of Jameson (U.S. Pat. Pub. No. 2004/0103013).

VII. ARGUMENT

A. Anticipation rejection of claims 1-5 and 8-19 over Dawson

Claim 1 requires "organizing…previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders, the number of bidders varying among the sub-samples." For this limitation, the Examiner cited paras. 23-25 and 27 of Dawson. These paragraphs of Dawson teaches ranking buy and sell orders by price (para. 25). The cited paragraphs of Dawson, however, do not at all teach organizing auction data into sub-samples with each sub-sample comprising "bid data associated with auctions having a common number of bidders, the number of bidders varying among the sub-samples."

Claim 1 also requires "applying, by the processor, an **inverse bid function** to at least two sub-samples." Appellants' specification explains that an inverse bid function "expresses a bidder's valuation as a function of the bid he or she submits, the distribution of posted bids, $G(b_1, b_2, \ldots b_n)$, and the number of bidders in the auction." Disclosure p. 3, para. 12. Claims are to be construed in light of the specification. MPEP § 2111 explains that that "claims must be 'given their broadest reasonable interpretation consistent with the specification.'" Further, the broadest reasonable interpretation "must also be consistent with the interpretation that those skilled in the art would reach." Id.

For the quoted limitation regarding an "inverse bid function," the Examiner cited para. 33 of Dawson which states:

> In a preferred embodiment, exchange rate quotes are captured on a round-the-clock (RTC) basis, by sampling (snapping) the data at regular intervals. Only those samples (snaps) that fall within a fix period are used to calculate a fixed spot rate; the other samples used to monitor the behaviour of the market, so that anomalies which may impact the next fix can be identified and analysed ahead of time.

The above-quoted paragraph explains that exchange rate quotes are sampled and used to calculate a fixed spot rate. Dawson's reference to using sampled exchange rate quotes to calculate a fixed spot rate is not at all the same as an

inverse bid function. Appellants do not feel it necessary to amend claim 1 to further refine the difference between the spot rate calculation of Dawson with the inverse bid function limitation of claim 1 because the claim must be given its broadest reasonable interpretation consistent with the specification. One of ordinary skill in the art would not at all believe Dawson teaches the use of an inverse bid function (i.e., one that expresses the bidder's valuation as a function of other parameters such as his or her bid, the distribution of posted bids and the number of bids in the auction.

Claim 1 also requires "applying, by the processor, a **direct bid function** on the first pool to generate sample bids." The Examiner identified para. 43 of Dawson as allegedly teaching the use of a direct bid function. Appellants' specification defines a "direct bid function" as: "By way of definition, for a given set of structural variables, a direct bid function represents the optimal bid corresponding to all values of a specified value distribution, $F(v_1, v_2, \ldots v_n)$ where v represents a value for a particular bidder and n is the number of bidders." Disclosure p. 3, para. 11.

> Paragraph 43 provides:
>
> The second processing means may be arranged to categorise certain samples firstly as either valid or questionable, and subsequently to re-categorise questionable samples automatically as valid or erroneous depending on samples received subsequently in accordance with predetermined criteria.

This paragraph explains that the samples are categorized as valid or questionable and then questionable samples are categorized as valid or erroneous. This categorization is not all the same or even similar to a direct bid function which provides an optimal bid.

In a response filed by Appellants on March 18, 2010, Appellants argued that many or most of the anticipation rejections simply quoted the claim language and included one or more paragraph numbers of Dawson. Appellants explained that the Examiner had not provided any explanation as to how the cited

paragraphs compare to the claim limitations. Appellants requested a better explanation of the rejections.

The Examiner responded merely by stating:

> Examiner argues that Dawson does disclose elements found in Applicant's claimed invention. Dawson discloses the following: the present invention relates primarily to an improved apparatus and methods for establishing and verifying fixed currency or commodity prices. The invention further relates to methods of trading in different currencies, commodities or the like, and to methods of valuing assets held in a plurality of currencies… (see at least ABSTRACT). Information gathered is provided to consumers to assist them in making best choice with regards to commodities, currencies, and stocks. Examiner respectfully maintains rejection based on the information provided.

Final Office Action pages 2-3. Even if the above is a true representation of the teachings of Dawson, such teachings still do not anticipate the specific limitations of claim 1 argued above.

For at least these reasons, the Examiner erred in rejecting claim 1 and its dependent claims are allowable over Dawson. Some or all of these reasons apply to the other independent claims, and their dependent claims, as well.

B. Obviousness rejection of claims 6 and 7 over Dawson in view of Jameson

Claims 6 and 7 depend from independent claim 5 which is allowable over Dawson as explained above. Jameson does not satisfy the deficiencies of Dawson. Thus, claims 6 and 7 are allowable over Dawson in view of Jameson.

C. Conclusion

For the reasons stated above, Appellants respectfully submit that the Examiner erred in rejecting all pending claims. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees

required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. A method of analyzing auction data, comprising:

organizing, by a processor, previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders, the number of bidders varying among the sub-samples;

applying, by the processor, an inverse bid function to at least two sub-samples;

pooling, by the processor, results from applying the inverse bid function to form a first pool;

applying, by the processor, a direct bid function on the first pool to generate sample bids;

matching, by the processor, bids from at least one sub-sample to the sample bids; and

pooling, by the processor, results from the matching with the first pool to form a second pool.

2. The method of claim 1 wherein applying the inverse bid function comprises applying a function that is applicable to an independent private values ("IPV") auction.

3. The method of claim 1 wherein applying the direct bid function comprises applying a function that is applicable to an independent private values ("IPV") auction.

4. The method of claim 1 wherein organizing comprises forming a first group of large sub-samples and a second group of small sub-samples, the small sub-samples containing bid data associated with auctions that have fewer than a pre-specified total number of bid observations and the large sub-samples containing bid data associated with auctions that have more than a pre-specified total number of bid observations.

5. A method, comprising:

organizing, by a processor, previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders, a first sub-sample comprising bid data associated with auctions having more bidders than all other sub-samples;

applying, by the processor, an inverse bid function to the largest sub-sample to produce initial pseudo values;

applying, by the processor, a direct bid function to the initial pseudo values to calculate sample bids associated with a second sub-sample that is the next largest sub-sample, in terms of number of bidders, after the first sub-sample;

matching, by the processor, bid data contained in the second sub-sample with the sample bids to produce second pseudo values; and

combining, by the processor, the first and second pseudo values together to produce combined auction values.

6. The method of claim 5 further comprising applying the direct bid function to the combined auction values to calculate additional sample bids associated with a third sub-sample that is the next largest sub-sample after the second sub-sample, in terms of number of bidders.

7. The method of claim 6 further comprising matching the additional sample bids with the third sub-sample to produce third pseudo values and combining the third pseudo values into the combined auction values.

8. The method of claim 7 further comprising applying the direct bid function to calculate additional sample bids associated with additional sub-samples of decreasing size, in terms of the number of bidders, matching the sample bids to the additional sub-samples to produce additional pseudo values, combining the additional pseudo values into the combined auction values.

9. A system, comprising:

a processor;

memory containing an auction application that is executed by the processor and causes the processor to

form a plurality of sub-samples from an auction data set, each sub-sample comprising bid data associated with auctions having a common number of bidders;

apply an inverse bid function to at least two sub-samples;

aggregate results from applying the inverse bid function to form a first pool;

apply a direct bid function on the first pool to generate sample bids;

match bids from at least one sub-sample to the sample bids; and

aggregate results from the matching with the first pool to form a second pool.

10. The system of claim 9 wherein the inverse bid function comprises a function that is applicable to an independent private values ("IPV") auction.

11. The system of claim 9 wherein the direct bid function comprises a function that is applicable to an independent private values ("IPV") auction.

12. A system, comprising:

a processor;

an application executable by said processor and that causes the processor to

organize previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders;

apply an inverse bid function to at least two sub-samples;

re-sample results from applying the inverse bid function to generate re-sampled data;

apply a direct bid function on the sampled data to generate sample bids; and

match bids from at least one sub-sample to the sample bids.

13. The system of claim 12 wherein the inverse and direct bid functions comprise functions that are applicable to an independent private values ("IPV") auction.

14. A computer readable storage medium storing instructions that when executed by a processor cause the processor to process auction data, said instructions comprising:

at least one instruction that organizes previously acquired auction data into a plurality of sub-samples, each sub-sample comprising bid data associated with auctions having a common number of bidders;

at least one instruction that applies a first bid function to at least two sub-samples;

at least one instruction that re-samples results from applying the first bid function to generate re-sampled data;

at least one instruction that applies a second bid function on the sampled data to generate sample bids; and

at least one instruction that matches bids from at least one sub-sample to the sample bids.

15. The storage medium of claim 14 wherein the first bid function comprises an inverse bid function.

16. The storage medium of claim 14 wherein the second function comprises a direct bid function.

17. A computer readable storage medium storing instructions that when executed by a processor cause the processor to process auction data, said instructions comprising:

at least one instruction that forms previously acquired auction data into a plurality of sub-samples, each sub-sample comprising auction data associated with auctions having a common number of bidders, a first sub-sample comprising bid data associated with auctions having more bidders than all other sub-samples;

at least one instruction that applies an inverse bid function to the largest sub-sample to produce initial pseudo values;

at least one instruction that applies a direct bid function to the initial pseudo values to calculate sample bids associated with a second sub-sample that is the next largest sub-sample, in terms of number of bidders, after the first sub-sample;

at least one instruction that matches bid data contained in the second sub-sample with the sample bids to produce second pseudo values; and

at least one instruction that combines the first and second pseudo values together to produce combined auction values.

18. The storage medium of claim 17 further comprising an at least one instruction that applies the direct bid function to the combined auction values to calculate additional sample bids.

19. The storage medium of claim 17 further comprising matching the additional sample bids with a sub-sample to produce additional auction values.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.